

# B2B eMarketplaces and small- and medium-sized enterprises<sup>1</sup>

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## *Abstract*

Since February 2000, we have seen numerous announcements from large companies such as General Motors, Boeing, Ford and British Airways saying they are creating or participating in B2B eMarketplaces. Clearly, these companies believe they are going to derive benefits in supply chains from these trading exchanges. In analyzing the situation, the potential benefits to large organizations are obvious. However, the benefits to suppliers, who are usually SMEs, are less obvious. This paper draws on the authors' experience in working with Boeing to build an aerospace hub in Asia, and addresses the problems that face SMEs when they are asked to participate in exchanges. The paper includes an outline for a realistic business case that includes supplier considerations, and ends with a proposal for creating an exchange environment that makes it easier for SMEs to participate.

## Keywords

Marketplace, Exchange, Hub, Supplier Relationship Management (SRM), Private Exchange, Public Exchange, Consortium Exchange

## 1. Introduction

The exchange advocate (usually a large supply chain prime) stresses the joint benefits of participation. That is, benefits are promised for suppliers as well as the prime. These benefits are usually presented as greater access, more opportunities, and a "leveling of the competitive playing field." However, is this the case? Is it possible that rather than leveling the playing field, eMarketplaces could reinforce the advantages of big companies? Supply chain cost reduction for the prime is a direct threat to those suppliers who are delivering less added value, since they most likely will be replaced by a competitor in the eMarketplace.

This paper analyzes eMarketplace incentives from the point of view of the SME, focusing on two related factors:

- The Profit Squeeze, and
- The Technology Squeeze.

The first concept, the Profit Squeeze, is related directly to the economic incentives for participating in trading exchanges. How do suppliers maintain profit margins while supply chain costs are being reduced? The second concept, the Technology Squeeze, relates to the pressures faced by suppliers as they receive multiple exchange participation mandates from many large supply chain leads.

The presentation argues that exchanges cannot be successful unless there are benefits for large companies and SMEs, which is different from the prevailing approach to exchange implementation. SMEs will always participate at some level, especially if an important business

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<sup>1</sup> Keynote address at the Fourth International Conference on Stimulating Manufacturing Excellence in Small and Medium Enterprises, Aalborg, Denmark, 2001. Accepted for publication in *Computers in Industry*.

relationship must be preserved. However, if larger profit margins are available by exercising traditional distribution channels, suppliers will focus on traditional channels; hence, diminishing projected exchange transaction volumes. This paper identifies areas of common benefit for large companies and SMEs, and provides some insight into the future of public and private eMarketplaces, including a proposal for locating an exchange at a first-tier supplier, where the business model is more favorable to SMEs.

**2. Marketplaces, Exchanges, and Hubs**

While these terms are often used interchangeably, they generate confusion among managers. The following conventions are used in this paper. A marketplace is a virtual location for buyers and sellers to meet to execute a commercial transaction. Stahl provides a typical definition:

Vertical electronic marketplaces gather multiple products and services to bring new levels of efficiency to various industries: chemicals, autos, plastics, aviation, seafood, steel, medical products, paper, and many more. These marketplaces cut costs for business purchasers through increased choice and price competition, while giving sellers a place to unload inventory (Stahl, 2000).

The exchange could be public (open and neutral) or private (a dedicated supply chain). A number of services could be offered by an exchange, including spot purchasing, auction capabilities, catalog hosting, or other procurement and non-procurement related offerings. The concept is illustrated in Figure 1.

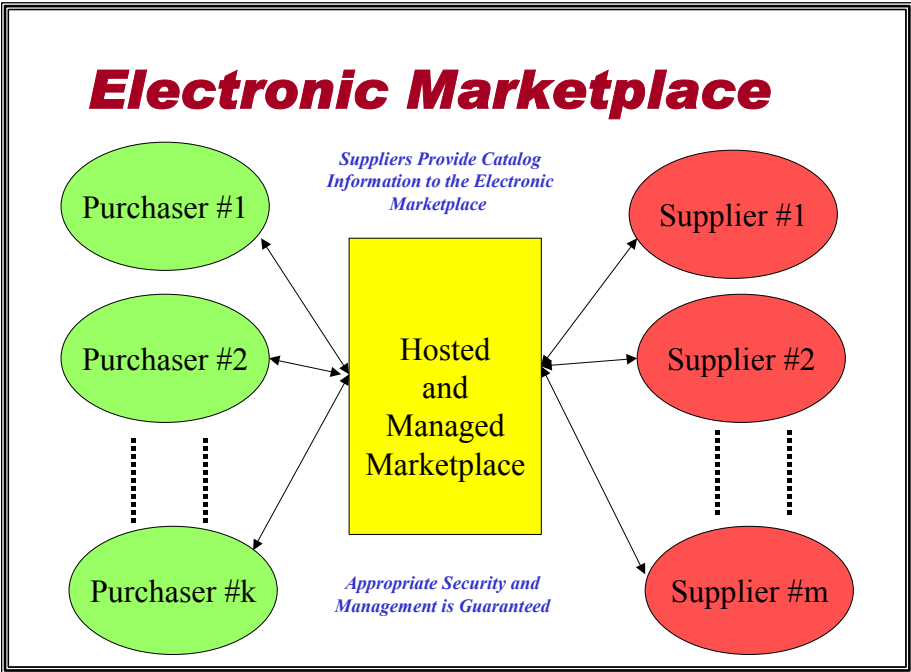


Figure 1: Marketplace/Exchange Concept

By the convention of this paper, a hub is a more specialized concept, providing document exchange among organizations<sup>2</sup>. The general concept is what is known as any-to-any document swap. A business document is received in one format, translated to another format at the hub,

<sup>2</sup> An exchange is more comprehensive than a hub. A hub is typically focused on the execution of release or delivery orders against a pre-existing contract. An exchange may be used to establish a contract (e.g., through an auction) or to facilitate spot purchasing (e.g., from a catalog).

and passed to another trading partner. In most cases, some opportunity for financial settlement is also provided. The document could be any flavor of XML, X12, EDIFACT, e-mail, fax, or even a proprietary format. The hub could be inter- or intra-organizational, providing information as required to support eBusiness transactions. Of course, the hub concept is most valuable for processing routine release/delivery orders that are executed under an existing contract. The idea is to spread the transaction cost over a large volume of transactions, thus achieving economies of scale. The hub concept should not be confused with what has become known as a “supplier hub,” a concept that brings suppliers together in one location (Karpinski, 2000). The supplier hub, such as Microsoft’s bCentral small-business hub, is very close to the concept of a marketplace as it is used in this paper.

Strictly speaking, the hub and spoke model of VAN-based Electronic Data Interchange (EDI) is a form of the hub model, but the concept as used in this paper is more general and flexible. The concept of a hub is presented in Figure 2.

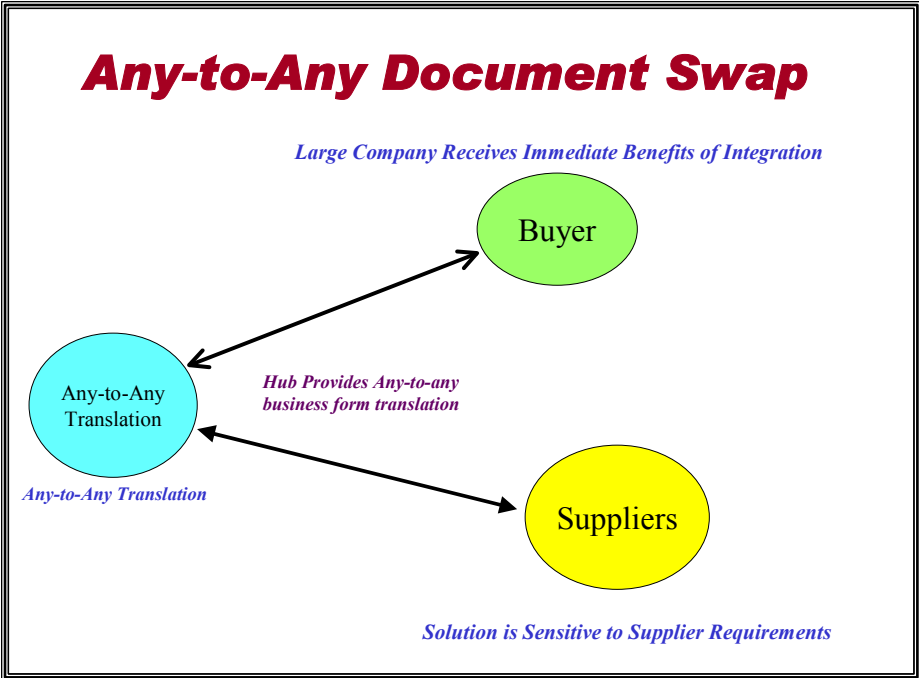


Figure 2: The Hub Concept

Much has been written in the literature about exchanges, marketplaces, and hubs. While widely accepted as the cornerstone of Business-to-Business (B2B) eCommerce, this paper argues that the current implementations of these concepts were never attractive to suppliers, and especially to SMEs.

**3. Supplier Participation**

From a supplier perspective, the hub concept requires a different response than the marketplace concept. Not only is there a huge disparity in the volume of executed transactions, the marketplace requires human intervention; i.e., someone has to evaluate the opportunity and make a decision. In the case of the marketplace, browser interaction using secure transaction processing is the interaction mode of choice. The Dell experience (Wagner, 2000) is a good example of why the browser is preferred. Over a two-year period Dell established totally integrated solutions with six customers, with nine more in pilot deployments. During the same period, more than 50,000 customers set up custom browser-base extranet sites as part of the

Premiere Dell.com program. The establishment of purchasing contracts and the execution of spot purchases requires hands-on intervention. There may be other reasons that suppliers won't participate in marketplaces, but browser technology is not a barrier. Everyone has a browser.

Hence, when supplier participation is discussed, the barriers for participation are different for marketplaces and hubs. For hubs, we argue that the barriers are primarily technical. For marketplaces, we argue that the barriers are economic and technical. These issues are discussed in detail in the following sections.

#### **4. The Profit Squeeze**

The "profit squeeze" relates to economic incentives as suppliers view them. The main thesis of the section is that successful exchanges are market facilitators, adding value to customers and suppliers by delivering positive ROI to all participants. For those exchanges that are primarily focused on supply chain cost reduction, their future is less certain. Suppliers are not "lining up" to reduce their profit margins. For example, if a major purchasing department reduces its supply chain cost by 20%, this translates into a direct reduction in supplier profit margins. While there are ways that suppliers can also reduce cost, that is not the point. If suppliers can obtain higher margins by using traditional channels, they will do so. Suppliers will always go outside the exchange and use traditional channels, if they can achieve higher profit margins by doing so.

The problem is even more pronounced with large public and consortium exchanges that are managed by large competitors. As an example, consider an automobile supplier. It makes these suppliers nervous when their three largest customers (e.g., General Motors, Ford, and Daimler-Chrysler) announce that they are creating an exchange. In effect, they are teaming up to reduce their procurement costs. Even though the technology precludes collusion, the point is that the reductions in supply chain costs translate directly to reductions in supplier profit margins. The suppliers know that the exchange will use every new technology to reduce cost; e.g., auctions, reverse auctions, real-time pricing, etc.

It is possible to partially offset the reduced margins through volume effects. Suppliers will often accept lower margins if transaction volume increases dramatically. However, in the large trading exchanges, there has not been a surge in transaction volume. In fact, just the opposite has occurred. One reason that exchanges are failing is that the volume is low. There has not been a dramatic increase in requests-for-quotes and purchase orders. With no new volume and disincentives on the supplier side, the situation is grim.

In general, supplier-side issues have not received enough attention. It "takes two to tango," and so far, most of the emphasis has been on the buyer side. Unless there are joint benefits for the buyer and the seller, exchange will not occur. There is some evidence that there is increased interest in the supplier-side issues, which is encouraging. Some of these issues are discussed by Karpinski (2001), and while it is still too early to tell the extent of commitment, it is certain that supplier-side issues will get more attention in the future. As noted by Karpinski, "although large buyers and eMarketplaces drove the early days of B2B eCommerce, both groups have learned you can only ignore – or worse, abuse – your suppliers for so long."

Although the buyer is not the primary focus of this paper, the disincentives that apply to buyers should at least be mentioned. If both buyers and sellers gain, economic theory suggests that exchanges develop easily. This paper has focused on the incentives for suppliers, but there are also problems for the exchange owners (i.e., the buyers). This is especially true if the products are branded and competitors are forced to use a common sales channel, as in a shared exchange environment. This leads to the suggestion that exchanges may be more appropriate for non-branded products. As noted by Cleary (2001), "specialty chemicals are one such industry suited to exchanges, since exchanges give manufacturers an easy way to market and

sell their products. Because their goods are normally unbranded products, the chemicals manufacturers don't mind using a common sales channel." Hicks (2001) discusses these issues in detail, and they are discussed in more detail in a later section.

Hence, the "profit squeeze" results in the following behavior. Suppliers will prefer traditional channels, since they can better manage their profit margins. Also, if eMarketplace sellers are forced to drop their prices to match their competitors' listings, they seldom see enough purchasing volume to offset the smaller profit margins that result from lower prices.

## **5. The Technology Squeeze**

The "technology squeeze" can be easily explained with an example. Suppose you are an aviation supplier. Since aviation is not your primary vertical, you are asked to participate in five different exchanges with multiple technology solutions. Each exchange uses a different flavor of XML and has different business rules. Since supplier back-office integration is a myth, what do you do? Panic!

The CEO of one large exchange described the situation as "EDI in drag." More than 120 standards that extend XML have been identified (Webster, 2000), and more than 200 flavors of XML have been identified. Furthermore, each company has its own implementation convention, whether its XML or EDI. As one executive stated (in a very politically correct way), the suppliers are "technically challenged."

The problem is even worse for dynamic content management (Roberts, 2001). Data to be aggregated (e.g., catalog data) is typically not in a standard format, either inside a company, or at the suppliers. Hence, aggregation can consume extraordinary amounts of time and resources. Suppliers are often asked to provide data in different formats to distributors and exchanges. The result is a lot of frustration and resistance from suppliers.

There is no easy solution. The larger solution providers (e.g., Oracle, SAP, etc.) support multiple flavors of XML. These "large company" solutions are outside the capabilities and budgets of SMEs. While XML is expected to achieve a higher supplier penetration rate than EDI, no one with a serious management orientation sees XML as the panacea as many technologists present it. The solution is absolutely unclear, but the following section gives a view of what will probably happen in the near future.

## **6. Supplier Relationship Management**

Buyers and Suppliers are reacting to the changing market conditions. The buyer response brings back memories of supplier development/partnering efforts of the early 1990s. Supplier Relationship Management (SRM) is a term that has appeared in recent months. On the supplier side, the focus is on new solutions that are easier to implement and less costly. SRM is focused on alleviating supplier barriers that are related to the buyer's business model as well as multiple buyers mandating multiple B2B standards

Supplier Relationship Management is the utilization of the latest technologies to build networks of collaborative relationships that bring joint benefits to large companies and their suppliers. Unlike eProcurement, the focus is on joint benefits with suppliers; hence, providing the incentives for suppliers to participate in supply chain relationships. SRM takes Supply Chain Management to the next level, allowing supply chain partners to act as a single business entity in a virtually linked supply chain.

But, how do companies proceed with the collaboration aspects of SRM? And, does a "one size fits all" model meet the complex needs of SRM? While no one knows the answers to these questions, they must be investigated and addressed in a logical and structured fashion. If SRM is added to the next generation of exchanges, the requirements will change considerably. As noted by Greenbaum (2001), "to fulfill their promise, exchanges need to provide support for a highly collaborative environment. That adds such requirements as partner relationship management, sales channel management, and collaborative product development to the requirements for next generation exchanges." Given the complexities in these business processes, it is difficult to predict how these solutions might be implemented.

## **7. New Technology Solutions**

From a technology perspective, the supplier response is challenging. One option is that the supplier follow the same path as the buyer. This would require continued investment in new technologies, and additional integration costs. To achieve efficiencies and obtain cost savings from lower-tiered suppliers, the suppliers would have to integrate internal business applications (back office integration with ERP), and then integrate external business relationships (Customer Relationship Management, Internet procurement, and supply chain management). Even then, the benefits are unclear, but even if they were clear, most SMEs cannot accept the cost/risk associated with trying to implement this solution.

Many solution providers are betting that suppliers will have a different response. One option is Application Service Provision (ASP) (i.e., hire someone else to "host" the applications). For this option, suppliers can purchase only the services that are needed. This avoids the high technical risk associated with a large investment in technology that is rapidly changing. It also provides protection from the high cost of making the wrong decision. If SMEs can reduce their costs by outsourcing their business applications with ASPs, then this offers one option for maintaining profit margins while opening new markets.

It's too early to predict how this will evolve. SRM solutions for suppliers are finally appearing, and some are reviewed by Karpinski, including Impresse, Viacore, Order Fusion, and bCentral (Microsoft). Others include Worldbid.com (Jacobs, 2001), Supply Solution, and Ironside (EC World, 2000). The important thing about these solutions is that they are not only focused on the buyer, but also on the seller. The offerings include client-side solutions that make it easier for suppliers (which are often SMEs) to participate in a collaborative way in exchanges. The suggestion is that collaboration will bring joint benefits; hence, changing the incentives so that suppliers will benefit from participation.

## **8. What is the Business Model?**

Given all of the problems, is there a business model that will work? Much has been written about the failed business models, but Plansky and O'Grady (2001) summarize the general consensus. They state, "The fundamental mistake made by early adopters was to view the e-marketplace opportunity as a revenue generator, rather than a means of achieving operational efficiency." This assertion will be discussed in more detail later, but an historical view of the business model is necessary to place the discussion in context.

First, it is important to note that the problems with the business model were well known at the time the first planned trading exchange initiatives were being announced. Young (2000) provides an excellent summary of the predicted consolidation and failures that have subsequently been realized. Late 2000 and early 2001 were characterized as the "period of denial." Exchange executives were working the conference circuit, still hyping the benefits of transaction- and subscription-based pricing, and in particular the benefits they offered suppliers. However, the suppliers were not buying the argument. The public exchange model was not

working, but the warning signals were being ignored. By late spring 2001, the closures were mounting, and it was impossible to continue to ignore reality. Flawed business models, combined with a technology-led recession, spelled then end for many exchanges.

It is important to note that some public exchanges did not follow the trend. Hick's (2001) notes that some exchanges continue to do quite well. He provides case studies on three exchanges (Arbinet, Chemconnect, and Altra Energy) that have achieved profitability while other exchanges were failing. As Hicks notes, they have common traits:

- "They have staked out industries dominated by commodity products and large numbers of highly fragmented buyers and sellers."
- "They have been willing and able to move beyond a revenue model based solely on claiming a portion of each transaction, a model that hasn't found wide acceptance in many industries. Instead, most independent e-marketplaces have found alternative revenue sources<sup>3</sup>."
- "They have been astute about conforming to the prevailing business practices in their industry, rather than attempting to force more radical changes than necessary on enterprises that are already uncomfortable with e-commerce."

This last point is extremely important, given the profit and technology pressures that were discussed in sections 4 and 5.

So, what have we learned? Is there a business model that works? What is the business case for an exchange? Unfortunately, more detail is needed before a business case can be outlined. The business case strategy must be viewed from the points of view of three exchange models:

- Private Exchange Model: A company's supply chain. Participation is closed and controlled by the buyer.
- Public Exchange Model: Open buyer and seller participation, facilitating buyer and seller interactions, and usually for a fee. A neutral party usually hosts public exchanges. Examples are VerticalNet and SciQuest.
- Consortia Exchange Model: Several companies pool their resources to provide a common technology platform for multiple partners/competitors, and usually within an industry vertical. The idea is to spread investment costs and to provide a single technology interface for all suppliers within an industry. Examples are Covisint (automotive) and Exostar (aerospace).

The private exchange business case is used as the baseline for comparison. The following is a proposed profit formula for a private exchange:

$$\Delta(\text{Profit}) = \Delta(\text{revenue from additional customer purchases}) + (\text{revenue from sale of other value added services}) + (\text{external subsidies}) - (\text{cost of exchange}) + \Delta(\text{internal cost due to efficiencies gained in the procurement process})^4.$$

The first thing to note about this formula is that it is not constructed from the point of view of the exchange. In fact, the exchange is a cost center! The formula is consistent with the Plansky and O'Grady assertion that opened this section.

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<sup>3</sup> The three exchanges described in the case studies have all moved into offering value-added services on a subscription basis. Some are also offering technology and hosting services to enterprises choosing to launch their own private exchanges.

<sup>4</sup> This formula examines the components of a profit function for a typical private exchange. It is of the form, profit = revenue minus cost, and it identifies the primary sources of revenue that could flow into an exchange, and balances it against the cost of building and maintaining an exchange.

The benefits of the exchange accrue to the supply chain prime. These benefits are in the form of additional revenue obtained through the ability to access new markets, and efficiencies gained in the execution of internal business processes. Some additional revenue could be generated by the sale of value-added services, but this varies from company to company. The actual exchange is a cost center, requiring significant investment in technology and consulting services. For the exchange to be viable, the increases in revenue must exceed the cost of the exchange.

For public exchanges, the business case is focused directly on the stand-alone exchange. The exchange must generate all of the revenue to offset the investment costs, and the sources of revenue to offset the costs have been difficult to identify in most cases. As previously mentioned, transaction-based pricing has not worked and value-added services (as products or services for sale) are often difficult to identify. This combination of problems has led some to assert that public exchanges are the most vulnerable. As noted by Hicks (2001),

Among the hardest hit have been the early independent players – those e-marketplace companies launched as venture-backed startups with a mission to remodel the way major industries buy and sell. But, unable to attract critical masses of buyers and sellers and facing competition from consortia-based e-marketplaces and the rising tide of private exchanges, once-high-profile independent, public marketplaces – such as Alumminum.com, Inc. and Ventro Corp.'s Chemdex and Promedix – have closed. Others, such as VerticalNet, Inc. and SciQuest, Inc., have all but ditched their initial business models – which were based on charging fees for online B2B transactions – and instead have begun to position themselves as B2B software vendors (p. 37).

As noted in Hick's case studies, some public exchanges have been successful, but for obvious reasons, the business model is more difficult to justify.

This leads to the final model – consortia exchanges. The consortia exchange model has characteristics of the private and the public models. While the model is associated with several dedicated supply chains, the exchange is usually formed as a separate company with equity partners. The partners are the supply chain owners and other investors, including, in some cases, the technology provider. Hence, the business case must be focused solely on the exchange, and indeed most consortia exchanges have revenue targets and are expected to be self-sufficient. While the partners often have deep pockets and continue to provide subsidies, it is difficult to see how many of these exchanges will survive. The largest consortia exchanges will survive, but only because of the heavy-handed participation mandate that the exchange partners impose on their suppliers.

It is also important to note that consortia exchanges have a separate set of non-technical problems that are not shared by private exchanges. The major problems<sup>5</sup> identified are:

- Lack of trust and an unwillingness to share supplier data with the separate exchange company,
- Unwillingness to outsource supply chain operations to a third party (the exchange company), especially if the third party is also hosting a competitor,
- Channel conflict and inability brand products,
- Lack of consensus among partners about where functionality should reside,
- High costs of integrating partner back-office systems with the exchange technology,
- Inability to recruit and integrate suppliers,
- Competition among competing software vendors and consultants, and
- Political in fighting among the member companies.

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<sup>5</sup> There are many references to these points in the literature. Some good starting points are Burt (2000), Buxbaum (2001), and Jacobs (2001). Hammer (2000) and Hicks (2001) are also instructive.

These points only serve to reinforce the assertion that many of the consortia exchanges will not survive.

The results of this section are summarized with the following a priori assertions about the business case:

1. The elimination of B2B companies with untested business models will continue. Many very good companies have failed because of the weakness of their business models. Others should not expect to succeed by pursuing these same (or similar) models.
2. Transaction-based pricing will not work for most exchanges. Buyers and suppliers are used to conducting their business free of charge. Transactions-based pricing has been a failure, and there is no reason to expect that one can implement this model when it has failed for everyone else.
3. The creation of new Internet exchanges has all but ended, and consolidation will continue through the immediate future. For this reason, companies must seriously evaluate their competitive advantage. Why can a particular company succeed when everyone else is failing?
4. B2B companies will fail unless they can figure out a way to make a profit. This is a critical point that until recently had been forgotten. The hub is a cost center. The revenues, for the most part, are derived from additional business that results from automation. If additional revenue cannot be demonstrated, then the exchange is probably going to fail.
5. It is unrealistic to assume that significant revenue can be obtained from selling value-added services at the exchange. While some companies have been able to do this, it has been the exception as opposed to the rule. It is unreasonable to assume that it will work for one company when it hasn't work for others.

## **9. A Proposal for Mid-Range Hub**

This paper has argued that the eMarketplace model does not directly align with the needs of SMEs. In this section, an alternative model is presented. This model, which is focused on first-tier suppliers, is designed specifically to meet the needs of SMEs.

As a first part of the proposal, the recommendation is to focus on the execution of delivery orders against contracts that are already established. Focus on direct purchases, while minimizing the dependence on auction and spot transactions. The reason for this recommendation is pragmatic, since for most organizations, direct execution will capture more than 90% of the transactions. For example, General Motors, one of the five founding firms behind the Covisint consortium exchange, announced in August 2001 that, since January, it has used the exchange to purchase \$96 billion worth of raw materials and parts for prospective auto models, and an additional \$2.2 billion in auction purchases (Brown, 2001). The message is quite clear: auction transactions are a small (but important) percentage of the total transaction volume. Covisint is typical; almost all of the transactions are devoted to direct purchases. Hence, for the proposed model, the focus should be on any-to-any document exchange for routine direct purchases and delivery orders that are executed against existing contracts.

As a second part of the proposal, the hub should provide the information in the format that the supplier desires. As opposed to forcing a particular standard and associated implementation convention on the supplier, the hub should deliver the information in the format that is most convenient for the supplier. This will not guarantee supplier participation, but it does make it much easier for the supplier to participate.

Provide the information to the supplier for free. The business case must accommodate the free provision of information, or it is likely the supplier will not participate. In some countries, the government could subsidize this service, but if subsidy is not an option, the cost must be included in the business case for the hub.

Maintain a private exchange focus. There are too many issues associated with public and consortia exchanges; hence those implementations carry too much risk. Furthermore, business case justification is more difficult. Why go where others have failed?

The final part of the proposal may be the most controversial. The hub should be placed at a large first-tier supplier, not a large company. The reasons for this placement are simple. Large companies have no incentive to broker transactions. In fact, large companies have incentives to force supplier to use their particular implementation of a standard, and this is indeed what they try to do. Large companies mandated EDI implementation conventions, and they are attempting to the same for XML. Alternatively, first-tier suppliers have incentives to broker transactions. They do business with multiple large companies, so they already provide data to their customers in multiple formats. With the appropriate technology, they could do the same for their suppliers. Since the hub pushes data in the format required by the supplier, the number of suppliers is not a barrier. Still, the suppliers could reject the hub, especially if transaction volumes with the buyer are low. One could argue that in this case, paper (or fax) may be the appropriate way to proceed in this case. Figure 3 summarizes the issues.

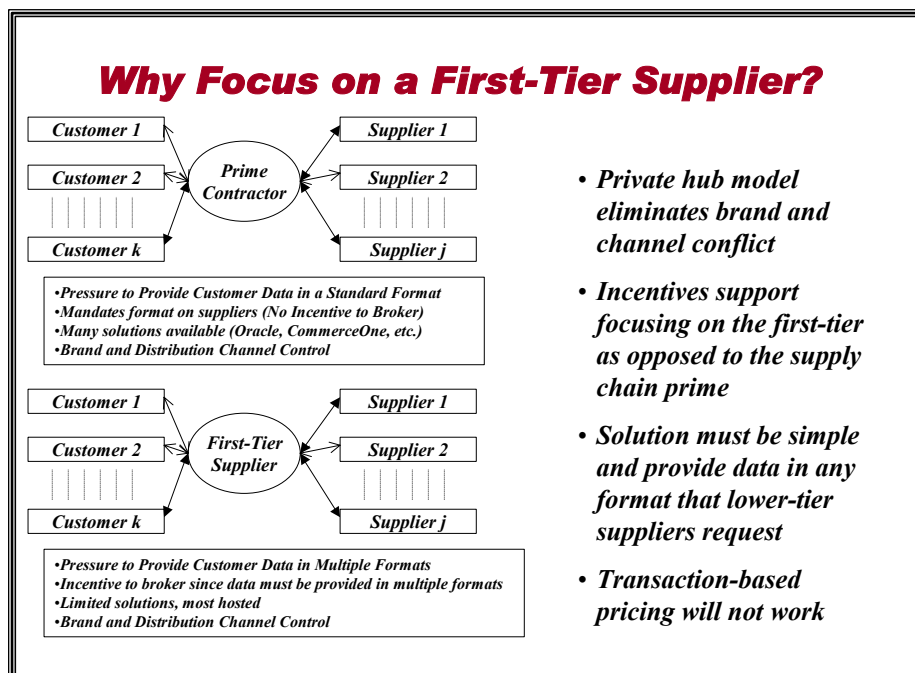


Figure 3: Locate the Hub at a First-tier Supplier.

The key to SME participation is that the solution be simple and low-cost. This proposal provides simplicity by providing data in any format the SME desires; e.g., HTTP, XML (any flavor and any Document Type Definition), EDI (any implementation convention of any standard), e-mail, and even fax. Low cost, as suggested in this proposal, is no cost. Today's technology will support such a model, but the implementation incentives are different. Large exchange providers, such as CommerceOne, Ariba, and Oracle have little interest in this model, because they are driven

to higher profitability and sales commissions that are realized from selling to large companies and government agencies.

The selection of the right first-tier supplier to host the hub is critical. The major criteria to consider are the following:

- The first-tier supplier (hub owner) must have sufficient infrastructure to support a hub. Second- and lower-tier supplier sophistication is not relevant, if the hub does not have sufficient infrastructure to support brokering.
- The first-tier supplier must be willing to provide multiple solutions to customers and suppliers. A single supplier solution is probably not appropriate, since supply chains contain firms with varying abilities and infrastructures. In our shipbuilding supply chain project (Gulledge, et al., 1999), we identified seven solutions, and the prime contractor adopted five of them.
- There must be a sufficient dollar value and volume of transactions in the supply chain to economically justify building a hub. If the volume and dollar value are low, the first-tier supplier cannot justify the investment. Higher volume means that the fixed cost can be spread over many transactions, reducing the per-transaction cost to the hub owner.
- The first-tier supplier (i.e., the hub owner) must be willing to "sponsor" consultants to work with the suppliers. The hub owner must work with the consultants to integrate the supply chain. The hub owner understands internal operations and business rules, and these must be shared with the consultants. The consultants must understand the hub owner's business rules and technology solutions, or it is impossible to bring the suppliers on line. If the first-tier supplier is not willing to do this, then the project will probably fail. The important issue is to provide assistance – not to sponsor consultants
- The hub owner must be willing to share internal business rules and supplier data with the consultants. It is impossible to target the "right" suppliers (i.e., the suppliers with the greatest potential for integration) without an up-front supplier study. This should be complete before the project is initiated.

While this proposal may seem controversial, it does conform to Hammer's (2000) requirements for e-marketplace success. In particular, everyone has to win. A system in which some participants win at the expense of others won't survive over the long run. The hub must be created and operated as a service to all participants rather than a profit-making enterprise. Following Hammer's lead, the hub should be developed to provide long-term benefits to all supply chain participants. The concept of quickly building a marketplace and making a killing with an initial public offering is an idea whose time is long past.

## **10. Conclusions**

This paper has discussed the supplier reaction to the recent proliferation of eMarketplaces. Since many suppliers are SMEs, the impact on this segment of the business base is dramatic. To date, the reaction of suppliers has been less than enthusiastic. Suppliers have been "squeezed" in at least two ways. First, there are economic disincentives for supplier participation. If the exchange objective is supply chain cost reduction, suppliers will use traditional distribution channels if they can maintain profit margins by avoiding exchanges.

Second, suppliers are faced with a plethora of standards and technologies, so from a technology point of view, participation is difficult. With a new emphasis on SRM, service providers are finally producing solutions that are sensitive to the needs of suppliers. Many of these solutions are hosted, relieving suppliers from significant investments in complex and constantly changing solutions. The future exchange landscape is unclear, but it is clear that SRM will be a significant component after market consolidation. The primary lesson-learned in

the last two years is clear: Exchange success requires solutions that provide joint benefits to buyers and sellers.

Third, this paper reviews the business case for building marketplaces. This discussion requires an understanding of the different types of marketplaces and the incentives for their operation. A profit formula is provided as a guide for a private exchange business case, which is used as a baseline for discussing public and consortia exchange models. The analysis suggests that the private exchange model, in most cases, is easier to justify.

Finally a proposal for a new exchange model is described. This model, which is located at a first-tier supplier, is more sensitive to the needs of SMEs. The argument is made that a first-tier supplier has incentives to broker transactions, while large companies have incentives for mandating requirements. The general requirements for a first-tier supplier to own a hub are also outlined.

## 11. Postscript

In February 2001, in a panel consisting of some of the largest Aerospace Exchange Executives, the following term was used to describe the short-run possibilities for trading exchanges: *Rational Pessimism!* It was noted once again that the successful exchanges will add value to the supplier-side as well as the buyer-side, and keep costs down; i.e., minimize back-office support costs for all participants.

In early April 2001 as the first proofing of this paper was taking place, the consolidation of B2B trading exchanges was well underway, with companies like Ariba (Brown, 2001), BroadVision (Erickson, 2001), and others announcing reorganization efforts. While the consolidation is underway, it is not clear where it will end. Some market leaders predict catastrophic outcomes. At a recent Forrester conference, Thomas Siebel stated that "On the B2B exchange side, I don't think anybody will survive - they're all gone" (Duvall, 2001). At the time this paper was written, this seems to be an over-reaction, but the forecast is bleak.

By September 2001, the consolidation continues, with many closures complete. Hicks (2001) provides a good summary of the understanding of exchange business models as late as August 2001. As we rapidly learn more about what works and doesn't work, the main arguments of this paper remain unchanged. One thing is certain – the future of public and consortia B2B exchanges is unclear. As noted by Hicks, some experts believe that "many e-businesses may end up using independent e-marketplaces in combination with private exchanges and consortium-based exchanges." One thing is for sure, the model is not going to disappear, and our understanding of exchange incentives, and our ability to successfully implement exchange models will only increase with time.

## 12. References

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